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Docket No. 13282-1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Clarke

Group Art Unit 1761

Serial No.: 09/858,190

Examiner Weinstein, Stephen L.

Filing Date: May 15, 2001

Title: Packaging of Bananas

12 pages total

Mail Stop Amendment. Commissioner for Patents, P.O. Box 1450
Alexandria, VA 22313-1450**REPLY**

Sir,

This paper is filed in reply to the Office Action mailed December 4, 2007. Attached hereto is a signed and legible copy of the amendment filed May 29, 2007.

In a telephone conversation with the undersigned on or about December 6, 2007, the Examiner raised two issues on which the following comments are made.

(1) The claims refer to the oxygen permeability and the ethylene permeability of "the sealed container". The permeabilities in question are for the entire container, including any atmosphere control member that may be present as part of the sealed container (which is not, in any case, a necessary feature of the container as claimed in, for example, claim 11). It is believed that this is clear from the wording of the claims, but the Examiner may wish to refer also to Table 9 on page 32 of the specification, where the permeability of the bag, the permeability of the atmosphere control member, and the permeability of the rest of the bag are listed separately (with the permeability of the bag being the sum of the permeability of the atmosphere control member and the permeability of the rest of the bag), and the permeability of the bag at 13°C/kg of bananas is obtained by dividing the permeability of the bag by the number of kilograms of green bananas (18.1 kg on page 26, line 3).

(2) The claims refer to the packaging atmosphere within the container as being "an equilibrium atmosphere in which the oxygen content has a substantially constant value which is from 14 to 19%, the carbon dioxide content has a substantially constant value which is less than 10%, and the total quantity of oxygen and carbon dioxide has a substantially constant value which is less than 20%." It is believed that one of ordinary skill in the art will have no difficulty in

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understanding the quoted passage. As noted in the passage bridging pages 6 and 7 of the attached response

... the packaging atmosphere is an equilibrium atmosphere in which the oxygen and carbon dioxide contents have substantially constant values within the stated ranges. Since the bananas are within a sealed container, this means that the rate at which the bananas consume oxygen from the packaging atmosphere is the same as the rate at which oxygen enters the packaging atmosphere through the sealed container, and that the rate at which the bananas produce carbon dioxide is the same as the rate at which carbon dioxide leaves the packaging atmosphere through the sealed container.

Thus, the claims exclude, for example, a container in which the packaging atmosphere is passing through the claimed oxygen and carbon dioxide ranges as the packaging atmosphere transitions from an initial atmosphere which is air (immediately after the container has been sealed) to an atmosphere having a lower oxygen concentration as recommended in the prior art. During that transition, the rate at which oxygen is consumed by the bananas is greater than the rate at which oxygen enters the sealed container (i.e. there is no equilibrium). The Examiner may wish to refer to the references noted on page 8 of the attached response, which recommend oxygen concentrations much lower than required by Applicant's claims and make it clear that the objective is to reach an equilibrium atmosphere. For example, Badran' 542, on page 4, line 10, describes the measures needed "in order that a bag reaches a proper equilibria of controlled atmosphere..." ; Anderson states in column 9, lines 24-26, that "the atmosphere reached a steady-state at about 5% oxygen and about 15% carbon dioxide"; and Antoon '331, in column 5, lines 21-39, describes in some detail the process by which the packaging atmosphere transitions "to the point where the consumption of oxygen is equal to the replacement of oxygen in the container" at which point "steady state is reached".

Respectfully submitted


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